

REMARKS

INTRODUCTORY COMMENTS:

Claims 55, 56, 58-72, 74-87, and 99-102 were examined in the Final Office Action dated June 9, 2004, and the Advisory Action dated December 9, 2004.

Claims 55, 56, 58-72, 74-87, and 99-102 were rejected under 35 U.S.C. §112, first paragraph, as allegedly including new matter.

Claims 55, 56, 58-72, 74-87, and 99-102 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,463,564 to Agrafiotis *et al.* in view of Uhlmann *et al.* (1990) further in view of U.S. Patent No. 5,639,603 to Dower *et al.*, taken further in view of either U.S. Patent No. 5,720,923 to Haff *et al.* or U.S. Patent No. 5,650,122 to Harris *et al.*

These claims, and those of related applications having serial nos. 09/067,638, and 10/116,325 were discussed with the Examiner in a telephonic interview conducted December 21, 2004. The amendments to the claims are made to respond to the new matter rejection. For reasons discussed in greater detail below, Applicants submit that the claims as amended distinguish the invention over the art cited by the Examiner in the Final Office Action mailed June 9, 2004 as reiterated in the Advisory Action mailed December 9, 2004.

STATUS OF THE CLAIMS

Claims 55, 56, 58-72, 74-87 and 99-102 were pending in this application. Claims 55, 56, 58-60, 62-67, 69-72, 74-76, 78-82, 85-87 and 99-102 have been amended. Claims 77 and 84 have been canceled without prejudice. Following entry of the amendments claims 55, 56, 58-72, 74-76, 78-83, 85-87 and 99-102 will be pending and at issue.

SUPPORT FOR AMENDMENTS TO THE CLAIMS

Claims 55, 56, 58-60, 62-67, 69-72, 74-76, 78-82, 85-87 and 99-102 are amended to recite that a thermodynamic property and at least one other criterion is used in the claimed methods:

a thermodynamic property and at least one other
criterion [criteria] selected from [target
accessibility,]targeting to functional regions of a
target nucleic acid sequence, [or]uniform
distribution to said target nucleic acid sequence,
and combinations thereof

to more clearly define Applicant's invention, overcome the 112, first paragraph new matter rejection, and to distinguish the claimed invention from cited references. Support for the amendments can be found throughout the specification as filed, at, e.g., Figs. 4, 5, 6, page 19, lines 16-19, page 20, lines 8-17, and 24 - page 22, line 2. The amendments to the claim therefore add no new matter.

REJECTIONS OF THE CLAIMS UNDER 35 U.S.C. §112, FIRST PARAGRAPH

The Examiner maintained the rejection of claims 55, 56, 58-72, 74-87, and 99-102 under 35 U.S.C. § 112, first paragraph as allegedly containing new matter. The rejection as applied to claims 77 and 84 is rendered moot by their cancellation. The amendments to the remaining claims are made in part to overcome the new matter rejection. The combination of a thermodynamic property with at least one other criterion selected from targeting to functional regions of a target nucleic acid sequence, uniform distribution to said target nucleic acid sequence and combinations thereof is explicitly taught by the specification as filed in at least those portions cited as supporting the instant amendment. Withdrawal of this basis for rejection is respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 55, 56, 58-72, 74-87, and 99-102 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Agrafiotis et al. (U.S. Patent No. 5,463,564); taken in view of Uhlmann et al. (1990); taken further in view of Dower et al. (U.S. Patent No. 5,639,603); taken further in view of either Haff et al. (U.S. Patent No. 5,720,923) or Harris et al. (U.S. Patent No. 5,650,122). Applicants respectfully submit that the references, alone or in combination fail to teach or suggest the claimed methods, and more specifically, fail to teach or suggest the instantly claimed combination of "a thermodynamic property with at least one other criterion selected from targeting to functional regions of a target nucleic acid sequence, uniform distribution to said target nucleic acid sequence and combinations thereof."

Withdrawal of this basis for rejection therefore is respectfully requested.

CONCLUSION

Withdrawal of the pending rejections and reconsideration of the claims are respectfully requested, and a notice of allowance is earnestly solicited. If the Examiner has any questions concerning this Response, the Examiner is invited to telephone Applicants' representative at (415) 875-2413.

Respectfully submitted,
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